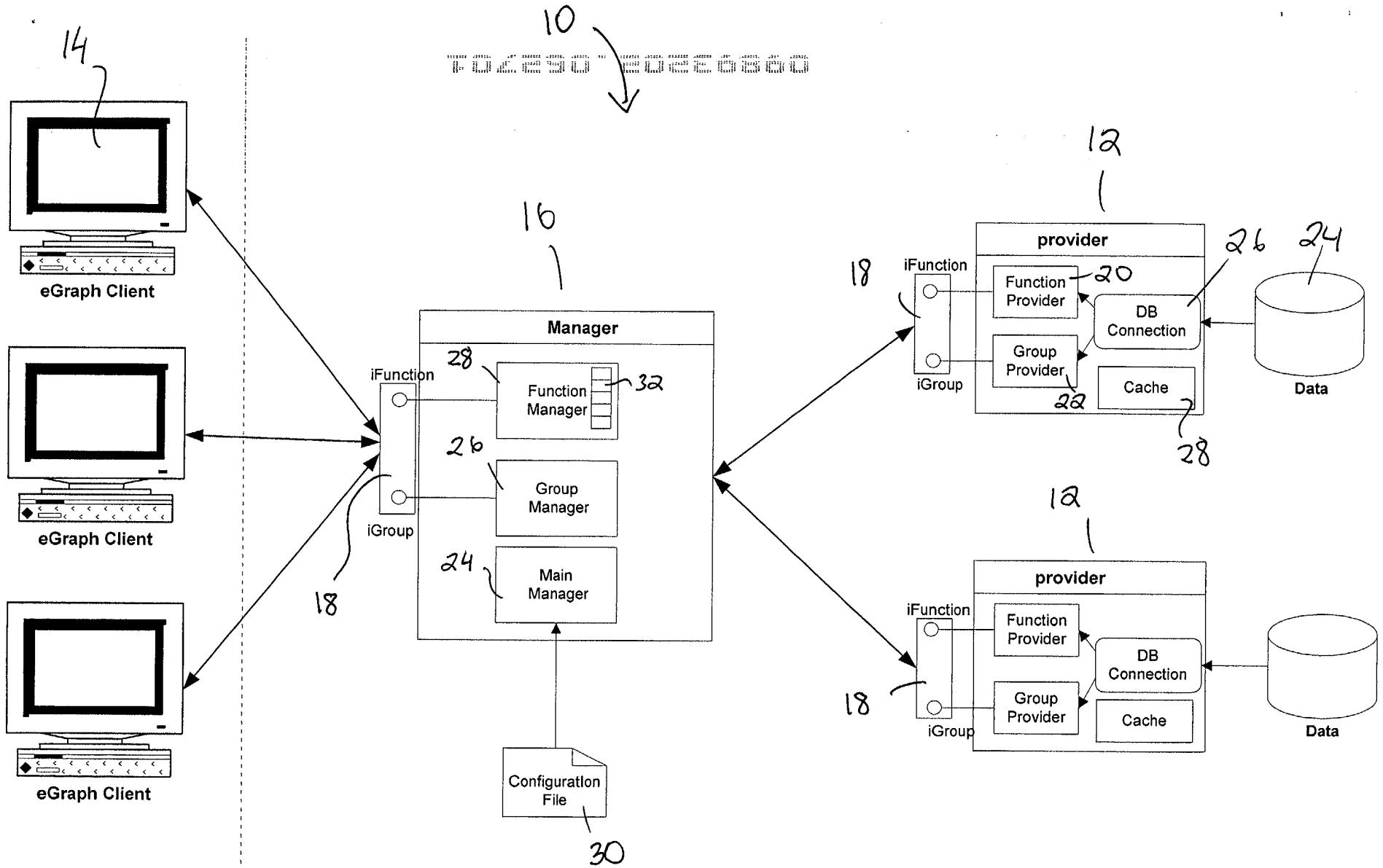

10
14
eGraph Client
eGraph Client
eGraph Client
16
Manager
iFunction
iGroup
28
Function Manager
32
26
Group Manager
24
Main Manager
18
Configuration File
30
12
provider
18
iFunction
iGroup
Function Provider
20
DB Connection
Group Provider
22
Cache
26
24
Data
28
12
provider
iFunction
iGroup
18
Function Provider
DB Connection
Group Provider
Cache
Data

FIG. 1

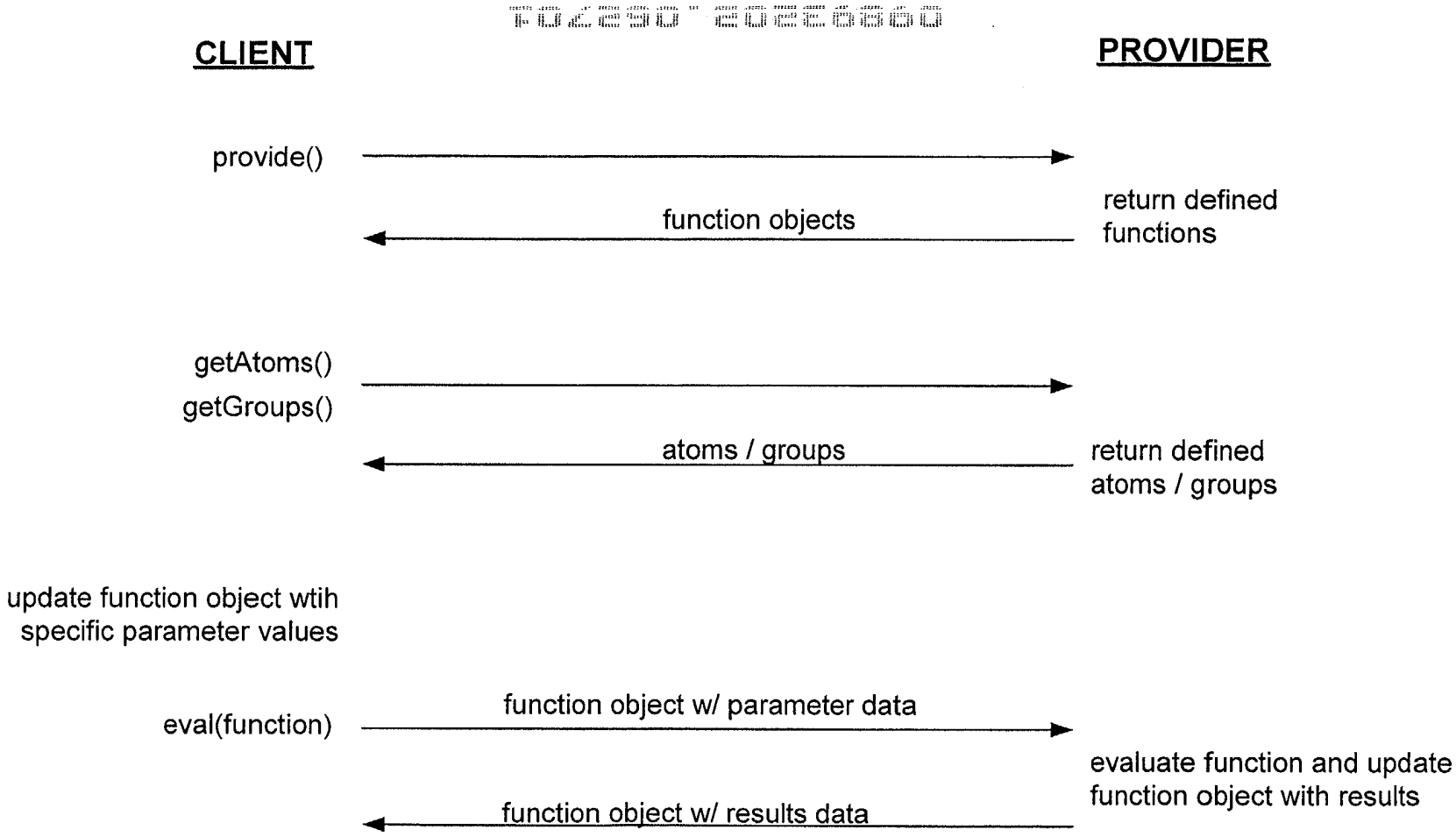

CLIENT
PROVIDER
provide()
return defined functions
function objects
getAtoms()
getGroups()
atoms / groups
return defined atoms / groups
update function object wtih specific parameter values
eval(function)
function object w/ parameter data
evaluate function and update function object with results
function object w/ results data

FIG. 2

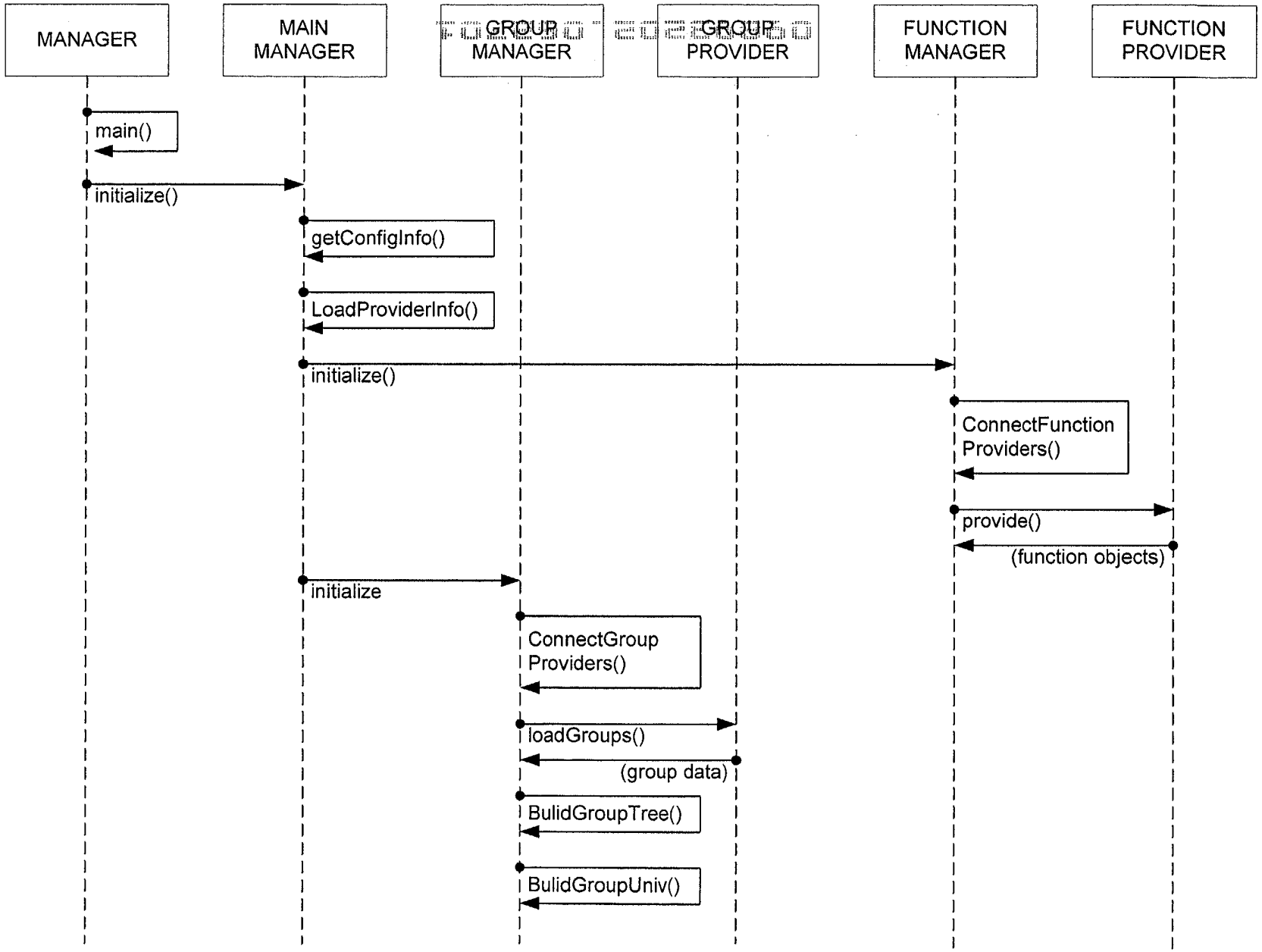

MANAGER
MAIN MANAGER
GROUP MANAGER
GROUP PROVIDER
FUNCTION MANAGER
FUNCTION PROVIDER
main()
initialize()
getConfigInfo()
LoadProviderInfo()
initialize()
ConnectFunction Providers()
provide()
(function objects)
initialize
ConnectGroup Providers()
loadGroups()
(group data)
BulidGroupTree()
BulidGroupUniv()

FIG. 3

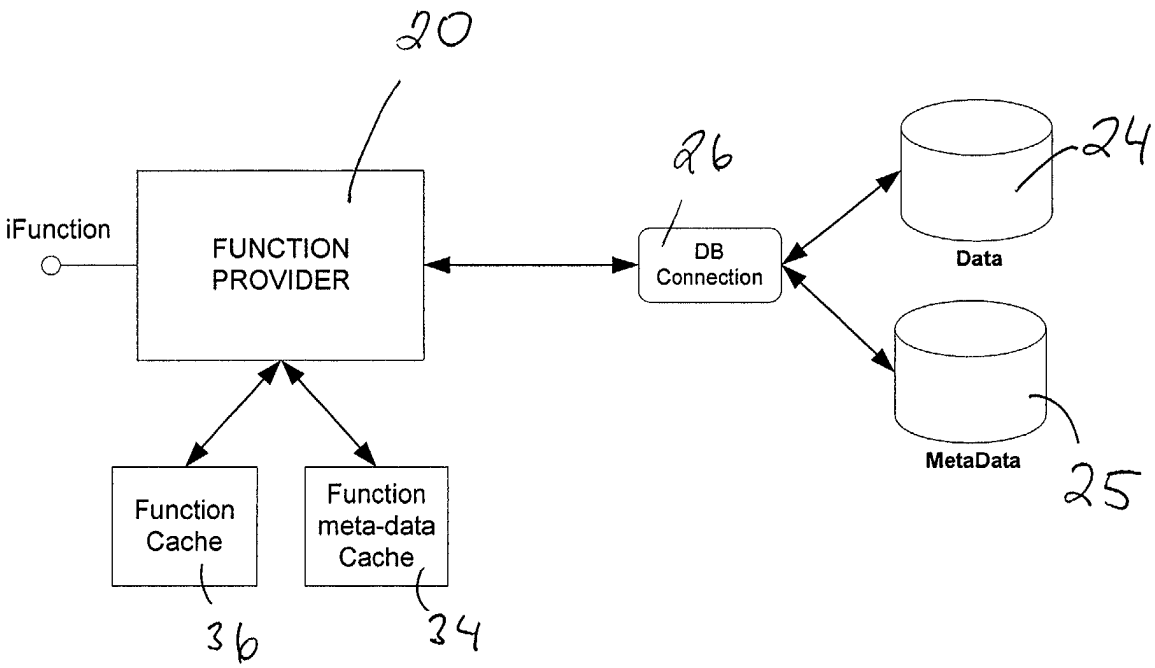

20
iFunction
FUNCTION PROVIDER
26
DB Connection
24
Data
MetaData
25
Function Cache
36
Function meta-data Cache
34

FIG. 4

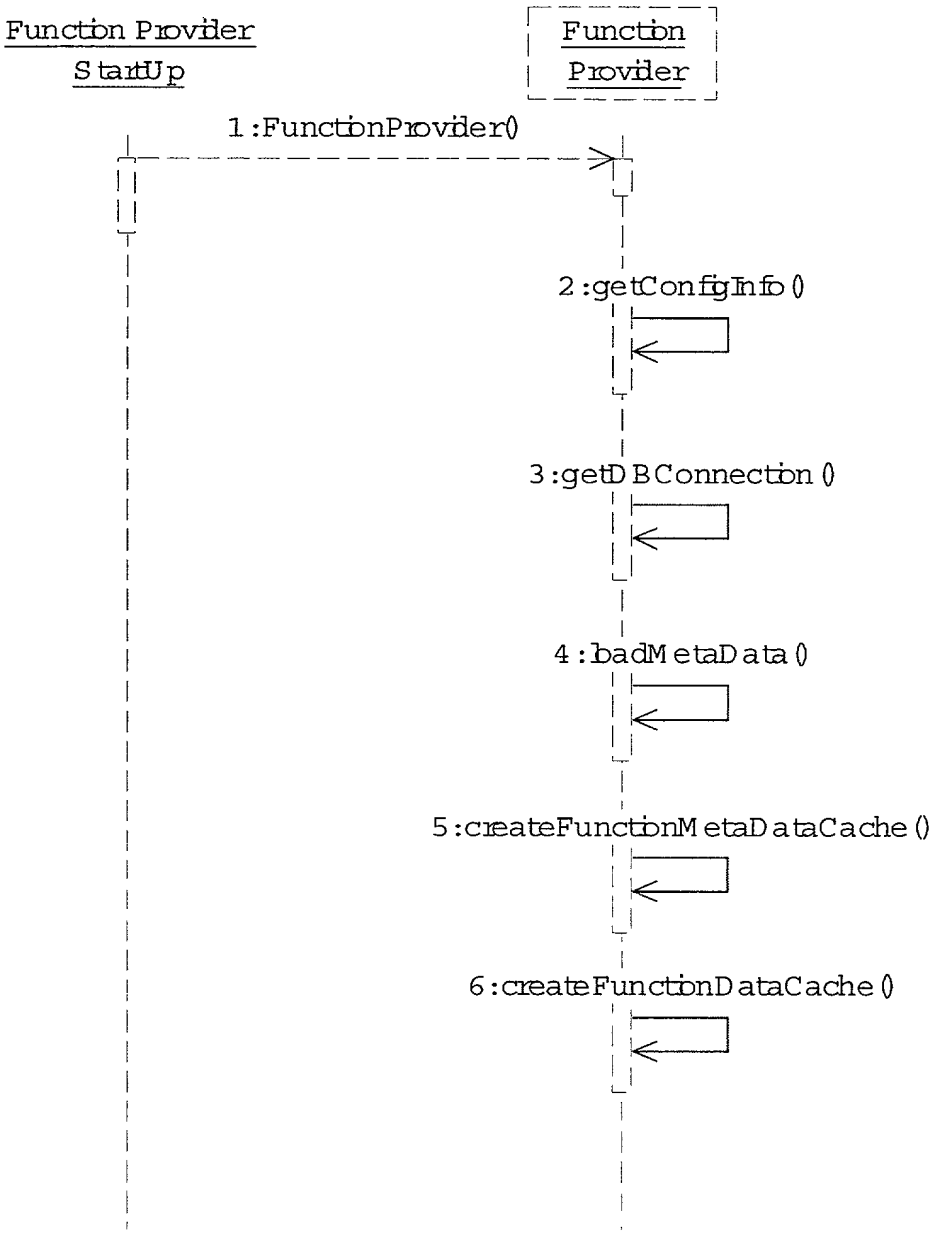

Function Provider
StartUp
Function
Provider
1:FunctionProvider()
2:getConfigInfo()
3:getDBConnection()
4:badMetaData()
5:createFunctionMetaDataCache()
6:createFunctionDataCache()

FIG. 5

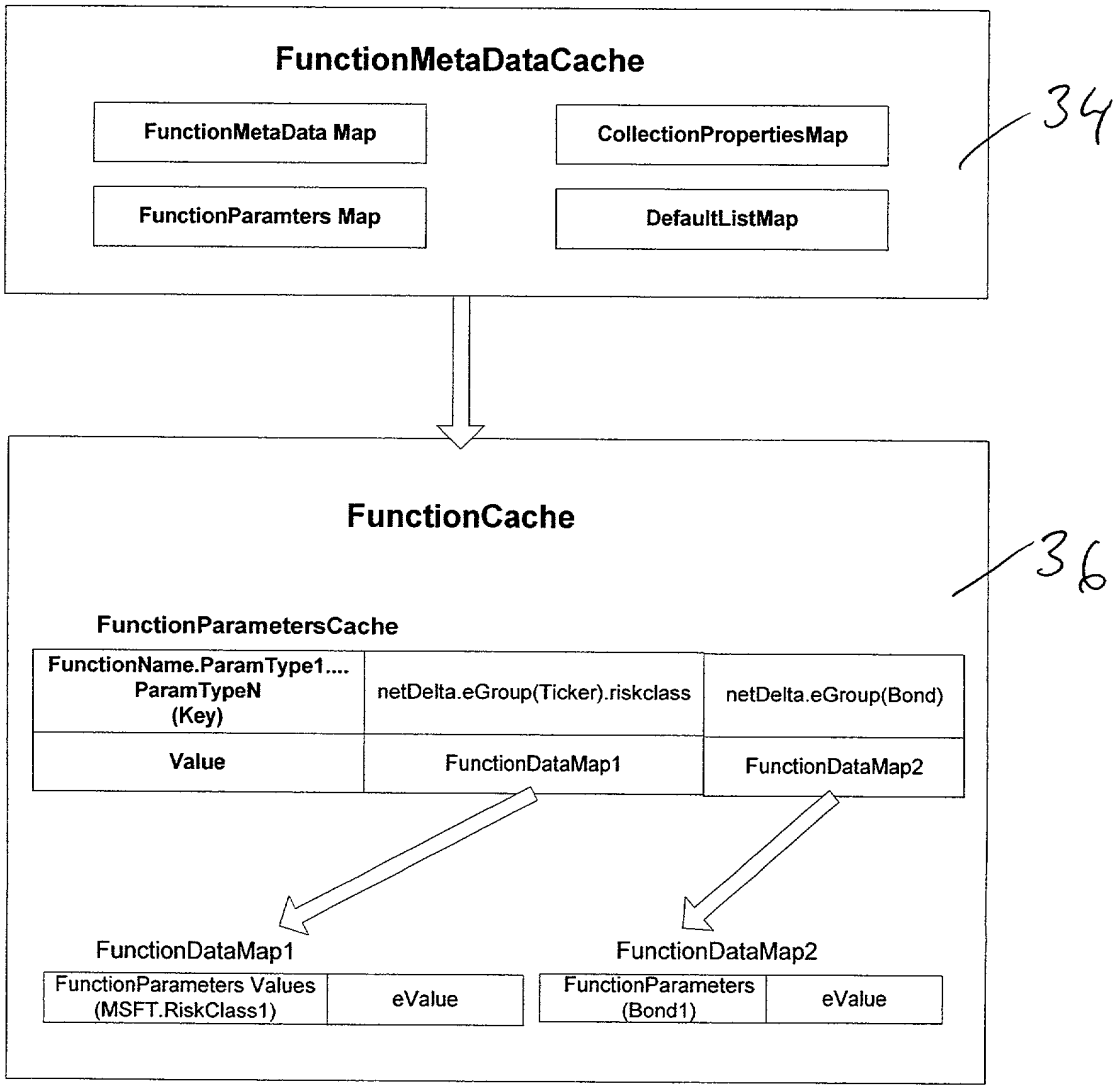

FunctionMetaDataCache
FunctionMetaData Map
CollectionPropertiesMap
FunctionParamters Map
DefaultListMap
34
FunctionCache
36
FunctionParametersCache
FunctionName.ParamType1.... ParamTypeN (Key)
netDelta.eGroup(Ticker).riskclass
netDelta.eGroup(Bond)
Value
FunctionDataMap1
FunctionDataMap2
FunctionDataMap1
FunctionParameters Values (MSFT.RiskClass1)
eValue
FunctionDataMap2
FunctionParameters (Bond1)
eValue

FIG. 6

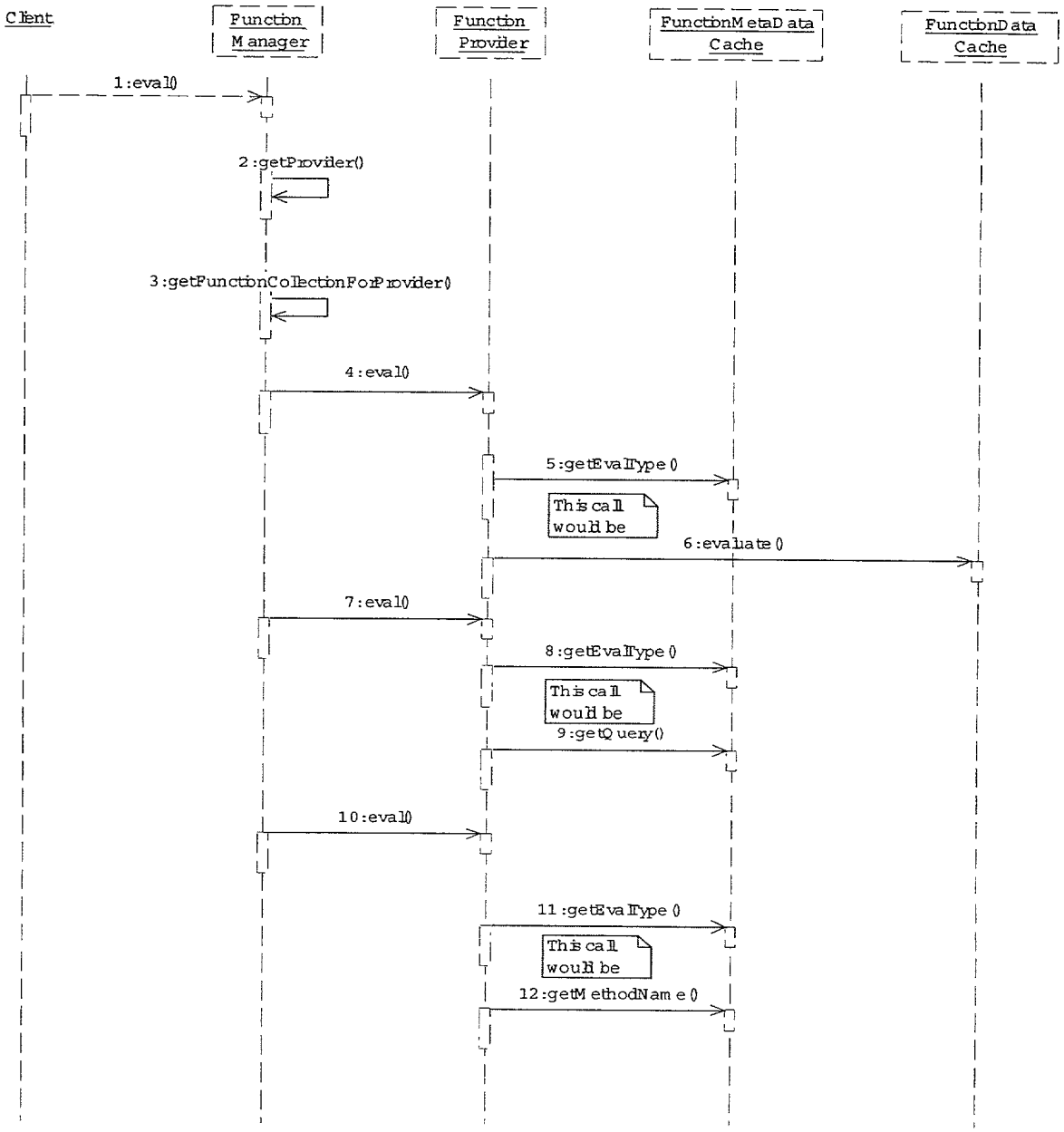

Client
Function Manager
Function Provider
FunctionMetaData Cache
FunctionData Cache
1:eval()
2:getProvider()
3:getFunctionCollectionForProvider()
4:eval()
5:getEvalType()
This call would be
6:evaluate()
7:eval()
8:getEvalType()
This call would be
9:getQuery()
10:eval()
11:getEvalType()
This call would be
12:getMethodName()

FIG. 7

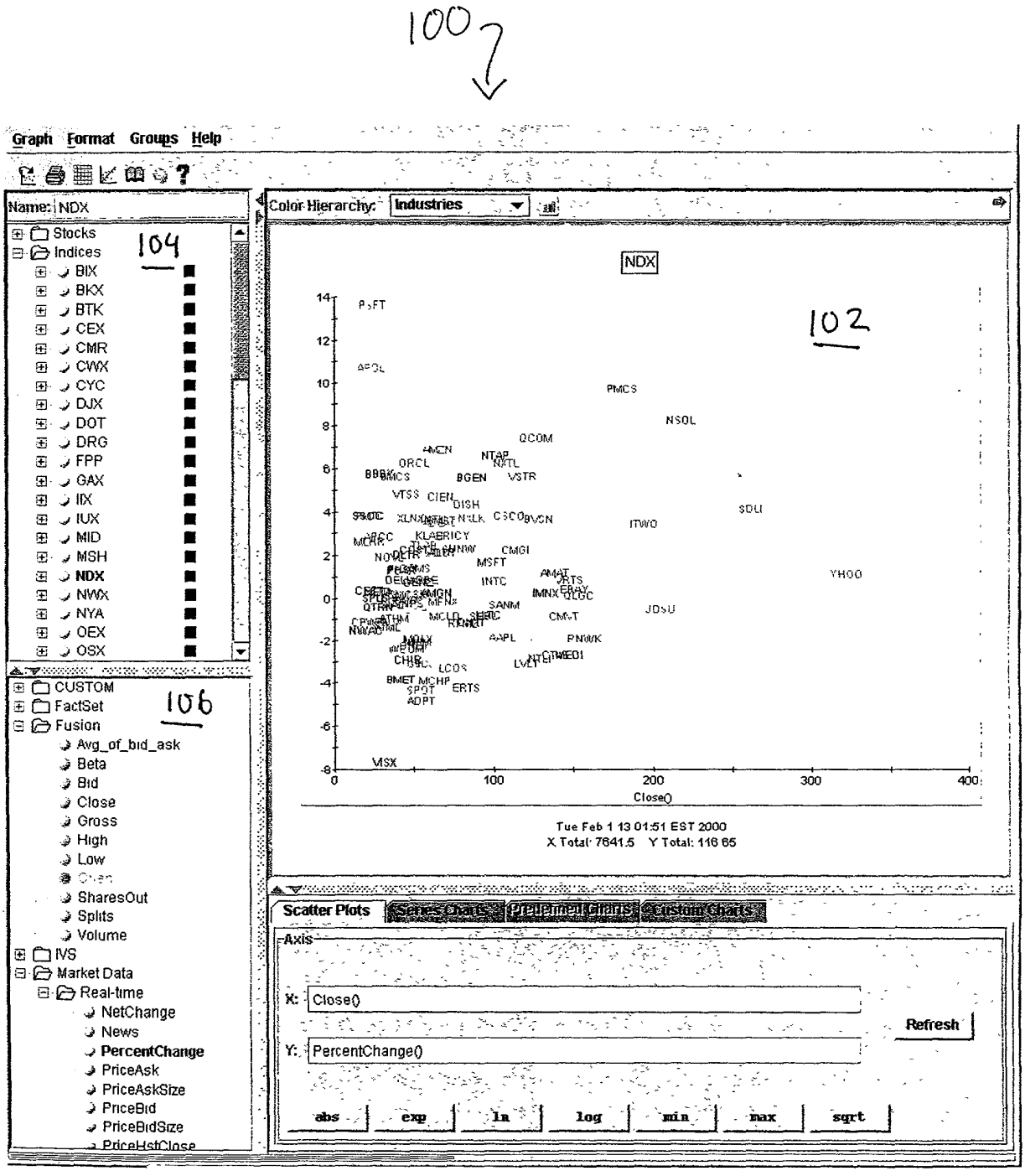

100
Graph Format Groups Help
Name: NDX
Color Hierarchy: Industries
104
Stocks
Indices
BIX
BKX
BTK
CEX
CMR
CWX
CYC
DJX
DOT
DRG
FPP
GAX
IIX
IUX
MID
MSH
NDX
NWX
NYA
OEX
OSX
106
CUSTOM
FactSet
Fusion
Avg_of_bid_ask
Beta
Bid
Close
Gross
High
Low
SharesOut
Splits
Volume
IVS
Market Data
Real-time
NetChange
News
PercentChange
PriceAsk
PriceAskSize
PriceBid
PriceBidSize
PriceHstClose
NDX
102
MSFT
AAPL
INTC
CSCO
QCOM
AMAT
YHOO
JDSU
ITWO
SDLI
PMCS
NSOL
VSX
Close()
Tue Feb 1 13 01:51 EST 2000
X Total: 7641.5 Y Total: 116 65
Scatter Plots
Series Charts
Preformed Charts
Custom Charts
Axis
X: Close()
Y: PercentChange()
Refresh
abs
exp
ln
log
min
max
sqrt

FIG. 8

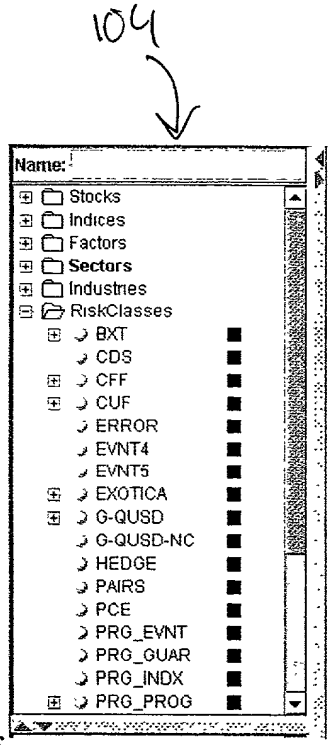


Fig.9 (a) Group Selection Tree

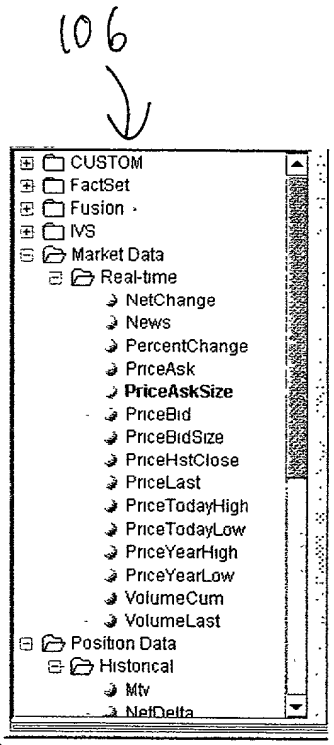
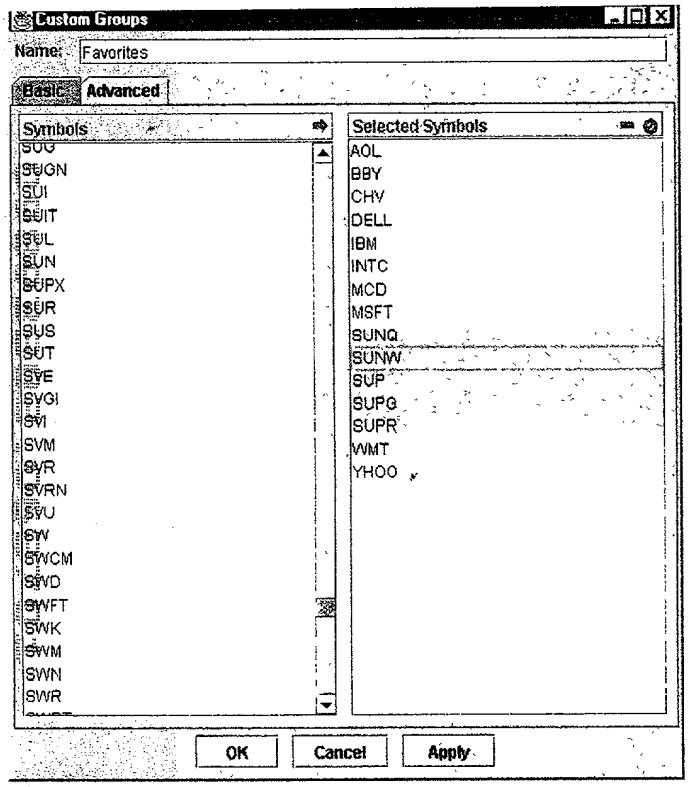
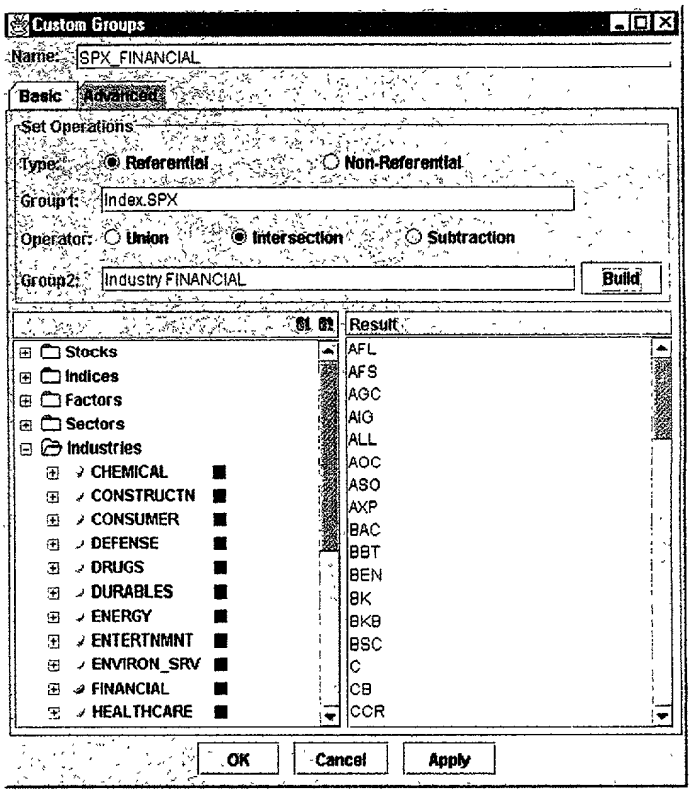


Fig.9 (b) Function Selection Tree


Custom Groups
Name: Favorites
Basic
Advanced
Symbols
Selected Symbols
SUG
SUGN
SUI
SUIT
SUL
SUN
SUPX
SUR
SUS
SUT
SVE
SVGI
SVI
SVM
SVR
SVRN
SVU
SW
SWCM
SWD
SWFT
SWK
SWM
SWN
SWR
AOL
BBY
CHV
DELL
IBM
INTC
MCD
MSFT
SUNQ
SUNW
SUP
SUPG
SUPR
WMT
YHOO
OK
Cancel
Apply

(a)


Custom Groups
Name: SPX_FINANCIAL
Basic
Advanced
Set Operations
Type: Referential Non-Referential
Group1: Index.SPX
Operator: Union Intersection Subtraction
Group2: Industry FINANCIAL
Build
Result
Stocks
Indices
Factors
Sectors
Industries
CHEMICAL
CONSTRUCTN
CONSUMER
DEFENSE
DRUGS
DURABLES
ENERGY
ENTERTNMNT
ENVIRON_SRV
FINANCIAL
HEALTHCARE
AFL
AFS
AGC
AIG
ALL
AOC
ASO
AXP
BAC
BBT
BEN
BK
BKB
BSC
C
CB
CCR
OK
Cancel
Apply

(b)

FIG. 10